

## GRADUATE COURSE WLL BE GIVEN IN FUEL ENGINEERING

Course II, VI, VIII, X Graduates  
Are Eligible to Take  
New Course

### OUTSIDE MEN ADMITTED

Universal Use of Fuel Offers  
Broad Field to Men  
Who Elect Course

A new Graduate course in Fuel Engineering is to be established by the Institute for those students who wish to specialize in the study of fuel problems. It will be open to graduates of Courses II, VI, VIII, and X, and to other college graduates who have had similar preparation either at the Institute or at some other college.

According to Professor R. T. Haslam '11, "While the course is more specialized than the regular undergraduate courses at Technology, yet because of the universal use of fuel in the production of almost everything we use, the subject is really very broad."

The work will consist of one year of classroom work in the Institute and six months of field work, after the satisfactory completion of which a Master's degree will be awarded. Students who have done good work will be encouraged to remain and study for a Doctor's degree.

#### Many Subjects Studied

The field work will be similar to that now carried on in the School of Chemical Engineering Practice. Only small groups of students will be permitted to take the course. Because the field work comes after the classroom work, the task in the field stations will be to apply the theory learned to the solution of practical problems. Because the entire time in field work will be devoted to education, students will receive no compensation for their work. The two field stations to be chosen will probably be one near Boston and the other near Buffalo.

The courses at Technology will include Gas Engineering, study of various kinds of fuels; design of furnaces, reactors, and similar apparatus; development and use of power, and design of power plants and their equipment; and Internal Combustion Engines. The field work will be under the supervision of Institute Professors, and will consist principally of quantitative tests of processes and equipment.

The growing use of fuel for various purposes made evident the need of the new course. Fuels are used not only for heat and power, but for various chemical products which may be obtained from them.

## TECHNIQUE FINISHED WITH SENIOR PICTURES

The Technique studio, that has been taking the photographs of the Senior Class for the last month, finally deserted the Institute just before the end of the term examinations to retire to its fashionable quarters in Harvard Square across from the far-famed Harvard University.

The studio remained at the Institute long enough to take photographs of practically the whole Senior Class and many of the departments and societies.

All Seniors who in the final rush of the term let their minds stray from the thought of returning the proofs to the studio will not have to bother with this slight inconvenience as the Technique reserved the right to make their own choice for the benefit of the Technique. As ample opportunity was given to all members of the graduating class to return their proofs to the studio and as there are always many of the students who are careless about returning them, those in charge of the next issue of the Technique thought it best to make the selection themselves so that the book could be sent to the printers at an early date.

### Unless You Want To Pay Uncle Horace \$5

1. Secure registration card from your registration officer before 3 o'clock
2. Exhibit registration card and exchange address card for roll cards at Bursar's office before 3.30 o'clock TODAY.

## TECHNOLOGY STUDENT KILLED IN ACCIDENT

Alden Smith and Mother Killed  
When Train Hits Auto

Alden H. Smith '27 of Lee, Massachusetts, a student in Course II, and his mother were killed at a grade crossing in Lee last Monday, when their automobile, which he was driving, skidded on to the track in front of the Pittsfield-New York Express of the New Haven Railroad. Smith was instantly killed; his mother died two hours after being taken home.

The car was climbing a slight grade on the straight approach to the crossing and, due to the ice, the car did not stop when the brakes were applied. A safety bar operated by a tender was down, but it did not succeed in stopping the car.

Smith attended Amherst for two years before entering Technology. His father is a master plumber in Lee. His mother was president of the Lee W. C. T. U. and organist at the Lee Methodist Church.

## PROFESSOR DEYBE TO LECTURE HERE

Eminent Physicist Will Give  
Physical Chemistry  
Lecture Series

Professor P. Deybe of the Eidgenossische Institute of Technology at Zurich will give a series of 20 lectures on "Some Aspects of Modern Physical Chemistry" on Monday and Friday of each week beginning on January 9. All the lectures will be held in room 4-231 at 4 o'clock.

In addition to his position with the Eidgenossische Institute of Technology which he has held since 1920 Professor Deybe is editor of "Physikalische Zeitschrift." From 1912 to 1914, he was Professor of Theoretical Physics at the University of Utrecht, and from 1914 to 1920 he was Professor of Physics at the University of Goettingen. Several European scientific societies claim Professor Deybe as a member.

Professor Deybe's earlier work was done on optics and Maxwell's theory. He has developed an improvement on Einstein's quantum formula for the specific heat of solid bodies, and independently discovered what is known in this country as the Hull method of X-ray diffraction. This latter work was done while at Goettingen. Some of his work was upon the subject of light quanta, quantum theory, X-ray photo effects, and atomic theory, in which field he gave a great deal of attention to models of molecules. Lately his research has dealt with the osmotic equation of state and theory of electrolytes the results of which he has published in his magazine "Physikalische Zeitschrift."

His lectures here will deal with his recent researches. He will show that the molecular forces may be studied assuming that they may be derived from purely electric forces. All of the 20 lectures are open to all those interested and will be in English. The last lecture will be on March 16.

Professor Deybe comes to the Institute at the invitation of the Department of Physics which is making arrangements to secure other prominent European physicists for lectures at Technology.

## LITCHFIELD WILL BE NEXT SPEAKER IN ALDRED SERIES

Officer of Goodyear-Zeppelin and  
Of Goodyear Tire Will  
Talk January 16

### 24 YEARS WITH GOODYEAR

Building of 60 Million Auto Tires  
Supervised by Course X  
Graduate of '96

P. W. Litchfield '96, first Vice President and Factory Manager of The Goodyear Tire and Rubber Company of Akron, Ohio, will deliver the first Aldred Lecture of this term in room 10-250 on January 16 at 3 o'clock. This prominent industrial manager who will address the members of the Senior Class and Graduate students is also Vice President and General Manager of The Goodyear-Zeppelin Corporation the Goodyear subsidiary which has taken over Zeppelin rights for America. Mr. Litchfield, a graduate of the Chemical Engineering course, joined the Goodyear organization in 1900 as production superintendent. Goodyear's first automobile tire was built under his direction and more than 60 million tires have been constructed since under his supervision. This is the largest tire production credited to any one man in the world.

#### Company Developed Rapidly

The Goodyear-Zeppelin Corporation pany was named in honor of Charles Goodyear, discoverer of the process of vulcanization which made rubber manufacture possible. Incorporated with a small capital but 26 years ago, Goodyear is today one of the 12 largest industrial corporations in the United States.

At the start, the company's main products were carriage tires, bicycle tires, and miscellaneous articles, and not automobile tires. The development of the automotive industry was a decade away when the Goodyear company was incorporated. Within the first ten years, however, Goodyear became firmly established. Despite financial difficulties and litigation with old established companies, a sales volume of \$2,000,000 a year was built up by 1908. In 1920 the annual sales exceeded the \$200,000,000 mark.

The real beginning of the automobile industry on a large scale in 1908 gave a tremendous business opportunity to tire manufacturers. Vast facilities in buildings and machinery, long experimentation and research, a world-wide search for materials, and the training and direction of an army of men were some of the requirements forced upon the progressive manufacturer of automobile tires. The rapid growth of the factory and acute housing shortage made it necessary for the Goodyear company to lay out a model city near the plant and build a thousand homes for its employees.

From the outset, the securing of materials presented a tremendous problem. The foresight of the Goodyear officials led to the establishment of a 17,000 acre rubber plantation in Sumatra, a 30,000 acre long-staple cotton plantation in Arizona, cotton mills in Connecticut and

(Continued on page 4)

## G. H. Mattes Will Present Aerial Surveying Lectures to Course I

Professor C. M. Spofford '93 of the Department of Civil Engineering announces that the Department has secured G. H. Mattes '95, Consulting Engineer for the Fairchild Aerial Surveys, Inc., of New York City, to give a course of six lectures on Aerial Surveying and Mapping to students of Course I, during the second term.

A large amount of Aerial Surveying is now being carried on throughout the United States, as it has been found particularly useful in relation to proposed projects for hydraulic development, where transmission line routes can be approximately selected without entering the property of the land owner. Another marked development of this work is in the line of mapping cities for purposes of tax assessments, determination of amount of traffic on various streets, and similar purposes, a notable

example being the recently prepared map of New York City.

Mr. Mattes is a graduate of Course I and has been actively engaged in engineering since his graduation. In the last few years he has devoted special attention to aerial surveying, having been in charge of the survey of the Tennessee River, made by this method. According to Professor Spofford, "Mr. Mattes has probably done more towards developing in a scientific manner the art of aerial surveying than anyone else in the country, and is consequently well fitted to inaugurate a course of this sort."

If the course is successful it will become a regular course of instruction for the classes in surveying. The Institute is probably the first engineering school to introduce a course of this character.

## I HAVE GREAT OPTIMISM FOR INSTITUTE'S FUTURE VAUCLAIN TELLS ALUMNI

### TECHNOLOGY WILL NOT OBSERVE SUN ECLIPSE

Since astronomy is merely one of the cultural subjects at Technology and is not a specific part of the engineering courses here, no official observations will be made of the eclipse of the sun taking place on January 25, according to Professor Goodwin.

Four members of Harvard's astronomical department will take individual observations with portable apparatus, but no definite plans have been announced as yet.

## DR. STRATTON TO RETURN SHORTLY

Expects To Be Back at Institute  
In a Few Weeks—Date  
Is Not Decided

President S. W. Stratton has not yet left the home of Dr. W. G. Morgan in Washington, where he is recuperating from an operation performed last term. However, he expects to be able to return to the Institute in a couple of weeks.

Dr. Stratton has declared that he regrets very much having been unable to keep open house Christmas as he did last year. It has been his custom to open the President's house on Christmas Eve and Christmas Day to those students who have remained in town during the holiday season.

When the President returns, he will probably hold a reception for foreign students and other students who live at such a great distance from the Institute that they were unable to go home for the holidays—that is, for those students whom he would have entertained at Christmas, had he been here.

Just before Christmas, Dr. Stratton was visited by two members of the Corporation, F. W. Hobbs '89 and Walter Humphreys '97, who reported him to be in a "wonderfully cheery mood." He told them that he misses being among the boys, and looks forward expectantly to his return.

At the President's office it was announced that no definite date has as yet been set for Dr. Stratton's return to the Institute. Mr. Parris, secretary to the President, is still in Washington.

## MEANING OF FACULTY VOTES IS DISCLOSED

Below is a list of the various votes which the Faculty dispenses three times a year. It should be noted that the number of the vote has no direct significance as to its seriousness.

- 1 Referred to the Dean in view of record.
- 2 Referred to the Assistant Dean in view of record.
- 3 Referred to Registration officer in view of record.
- 4 Referred to Professor \_\_\_\_\_ in view of record.
- 5 Without marked improvement graduation (the present or next) year is impossible.
- 6 Without marked improvement may not be allowed to remain at Institute beyond \_\_\_\_\_
- 7 Allowed to continue only on probation.
- 8 Not allowed to continue \_\_\_\_\_ year professional work.
- 9 Advised to withdraw.
- 10 General record prevents continuance. Must petition for readmission.
- 11 Record prevents continuance during the remainder of the present academic year.
- 12 Required to withdraw.
- 13 To be allowed to register in \_\_\_\_\_ year must have a clear record in all subjects below the \_\_\_\_\_ year.
- 14 Failures in more than 50 percent of work taken.

## HEAD OF BALDWIN LOCOMOTIVE WORKS TALKS AT BANQUET

Dean Talbot and T. B. Booth  
Thank George Eastman and  
'93 For Donations

"True optimism as a basis for our philosophy of life is what has made the United States the greatest nation on earth, and, I believe, will forever keep her above other nations. In view of the optimism and confidence of the business world at the present time, I promise that we are due, in the next few years, for the greatest periods of prosperity that this country or any other has ever known," declared Dr. S. M. Vauclein, chief speaker at the Annual Alumni Banquet held in Walker last Saturday evening.

"When Technology was founded 60 years ago, the engineering profession had no such assured position as it has today. There was no real need for engineering schools at that time; Technology was merely an experiment. But it was the optimism of the founders, their confidence in the coming need of the world for men trained in science, that made Boston Tech what it is today: one of the greatest engineering colleges in the world."

**President of Baldwin Company**  
"Education is the life blood of this nation, and this institution, in its pursuit of the refinement of the human brain, is adding materially to the power of the nation. I have great optimism for the future of Technology. My only admonition is that it devote itself to the requirements of the present, not to those of the past. The cobwebs of the past must be swept away, and our energies directed on the infinite possibilities of the future."

Dr. Vauclein is president of the Baldwin Locomotive Works, the largest and oldest locomotive company in the world. He was a member of the National Committee on Defense during the war, and took an active part in some of the phenomenal achievements of that organization. T. B. Booth '95, President of

(Continued on Page 4)

## New Series of Lowell Lectures Begins Tonight

An extensive course of lectures has been arranged this year by the Lowell Institute, beginning tonight. Four series of lectures have been arranged to start in January.

The first series is on "Our Mobile Earth," and consists of eight lectures on geognosy and other branches of geology. The lecturer is Dr. R. A. Daly, Chairman of the Department of Geology and Geography at Harvard. "Great Earthquakes of History" is the subject of the first lecture, which will be given at 8 o'clock tonight.

Major-General Sir Frederick Maurice, K.C.M.G., C.B., will give a series of eight lectures on General Robert E. Lee, beginning a week from tomorrow. The lectures will cover Lee's career from the time of his decision to throw in his lot with the Confederacy to the surrender at Appomattox Court House.

Professor Peter Sushkin will give two lectures on zoological and physiological phenomena of certain regions of Siberia and in Mongolia. Professor Sushkin is a member of the Russian Academy of Sciences.

(Continued on page 4)

## CALENDAR

- Tuesday, January 6  
7:30—Tech Show Skits, North Hall, Walker Memorial.
- Friday, January 9  
4:00—Physical Chemistry Lecture, Room 4-231.
- Friday, January 16  
3:00—Aldred Lecture, Room 10-250.
- Thursday, January 8  
5:00—Track Meeting, Room 10-250.

A Record of  
Continuous  
News Service  
for 43 Years



Official News  
Organ of the  
Undergraduates  
of Technology

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

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In Charge of This Issue:

J. H. Melhado '27

HAPPY NEW YEAR

IT'S all over now. Back to the old Grind. In harness again. Such were the comments being passed around as we left for the station. Is this right? Is it all over now, referring, of course, to the fun? True, the round of dances, parties, and so on, that always is symbolical of Christmas vacation, has again become history, but isn't it true that there is as much fun to be had within five miles of 69 Massachusetts Avenue as there is anywhere in this mundane sphere?

Is it really so much of a grind? Institute men, at least this year, are not looking forward with apprehension to a flock of finals in the course of a few weeks. Our time is not quite so much our own for the coming ten weeks as it has been for the past two, but who here does not find time for a game of bridge or dance pretty nearly as frequently as do our esteemed confreres at Harvard? Taken all together, looking at the Institute from eyes brightened by the prospects of beginning a new year, isn't it a pretty good old place to be after all?

Now that examination period is over it is again brought home to us that if there is anything more to be condemned than final examinations, we'd like to know about it.

LET'S HAVE A CIRCUS

WITH the beginning of the new term, unfinished discussions from last term again come to the front. Prominent among these is the subject of the Technology Circus, which was raised at the last meeting of the Institute Committee, at which the chairman of the Committee was authorized to appoint a committee to consider the matter.

Because it was so late in the term, the appointment of a committee was permitted to go over until this term. Meanwhile, objections began to be raised to the holding of the circus because it was feared that if held in the newly decorated main hall of Walker, the stunts might injure the decorations.

The student body wants a circus. There is no doubt about that, as anyone may discover by asking a few students. And there is really no good reason why it should not have what it wants. Perhaps the stunts put on by the various classes, activities, and fraternities have a tendency to be dangerous to anything so delicate as the Walker main hall decorations. But the main hall of Walker is not the only place available for the circus.

Not only is Walker Gym convenient, but there is a still better place available—the hangar gym. True there is no balcony there, but the hall is plenty large for anything which is likely to be demanded of it, the location is convenient, there is nothing there which can easily be injured.

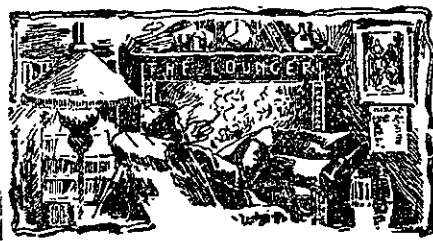
It is not too soon on the first day of the new term to begin to consider the question seriously.

When President Stratton returns to the Institute in a couple of weeks, we look forward to some action on the Eastman gift.

HOW ABOUT IT?

NOW is the time when men living between Massachusetts Station and the river begin to wish for a six cent fare across the bridge. With winter storms coming on all too frequently, the daily Arctic Expedition over the river seems three times as long as it will in the days to come next May. But even then, it usually doesn't seem quite long enough to warrant the expenditure of ten cents. At any rate, it doesn't seem so good to pay car fare at the rate of twenty cents a mile, as is the case if one rides from Beacon Street to Memorial drive.

The run from Harvard square to Commonwealth Avenue is not nearly so far as from Chestnut Hills to Massachusetts Station, yet there is a half price fare on the latter run, while the former is cut short at the river. It does seem as though, if the "EI" can afford to carry a person from three to four miles from out in the outermost limits of Brookline in almost to Massachusetts Station for six cents, it could do the same for the two and a half miles from Harvard Square to, say, Commonwealth Avenue or Newbury Street.



The Lounger has returned from the wilds. He had the most absolute loaf that he has ever tackled. He was located in a metropolis of about 250 souls, and a cemetery, which made the total population nearly four hundred. The cemetery was the liveliest thing in town. He used to spend hours watching the snails whiz by. One evening a car went by. There was great excitement, and the telephone operator was busy for half an hour while everyone called everybody else's attention to the fact that someone had gone by. It's a great life, but too damn strenuous.

It was chilly too. It was so nice to get up in the morning and look at the thermometer only to find that the mercury was frozen solid. Even at that, it was warmer than walking across the Harvard Bridge in mid-summer. The next process was to gather around the old Yule Log and pray for heat. But the prayers didn't seem to do any good. The heat froze as fast as it emanated from the fire, and fell in great drops that ran off across the floor, charring the wood, for you see, it was so concentrated that it quickly burned anything it touched, but did not warm the atmosphere at all, and there was absolutely no radiation from the fire.

The Lounger was looking for excitement one day, and he was helping wipe some dishes. The dish towel got quite wet in the course of time, and he tossed it over a rack, which was over the cook stove. It fell off, and lit in the stove. Fearful lest it be burned, he jumped to rescue it, but it had already froze tight to the stove. One night the bread got left somewhere where it was cold. Accordingly it froze. The next morning when they came to make nice thin slices of toast with it, the bread toasted nicely on both sides, but on eating it, it turned out to be still frozen solid in the middle, and didn't go so well.

It was a cold vacation.

Christmas sure does cost money. Not only the presents—the Lounger expected to get soaked double price for Christmas specialties—but the dances and theatres he crowded into the few days before he went up to the wilds! The Lounger is prepared to admit that the woman pays, but he has found out now who gives her the money.

The Charles has frozen over. Having lost touch with the grand and glorious Institute during vacation, the Lounger does not as yet know whether that means anything. He has not heard of a single attempt, successful or otherwise, to do an Eliza, but he has his eagle eye fixed on the police court so that he may spy the first man to get caught.

In spite of attempts made to suppress it, the Lounger is going to reveal the story of the downfall of the Alumni. At the banquet Saturday they proved themselves addicts of the new vice that has insidiously crept into our lives, holding in its deadly grip the Lounger himself. You've guessed it. Cross-word puzzles.

A crossword puzzle printed in the Transcript of January 2 entitled "Test for Tech Men" was copied, and each man at the dinner was given a chance to prove his ability. About the time the coffee was due to appear, a solution was served (of the puzzle, not of coffee) and the post mortems began. It was worse than exams.

Votes, votes, votes, votes, votes have been sent out again. Who said there's no discharge in the war between the students and exams. Many of the Lounger's friends have found that that's a damn lie. But "mirabile dictu," the Lounger himself is back for another term.

One of the new forms of indoor sports that surpasses the cross word puzzle in its utter degradation of the human mind is the marking glorified New Year's resolutions and breaking them. Ye Lounger did conceive of about twenty of the "promise not to do's" and so far has broken seventeen of them.

Play Directory

**BOSTON OPERA HOUSE:** Dark this week.  
**COLONIAL:** "Earl Carroll's Vanities." Beginning tonight. Joe Cook's in it so it ought to be good.  
**COPLEY:** "The Hottentot." Beginning tonight.  
**HOLLIS:** "China Rose." Damn good show. If you haven't already seen it, don't miss it.  
**MAJESTIC:** "Dixie to Broadway." Colored comedy back again.  
**PARK:** "The Best People." Humorous.  
**PLYMOUTH:** "Cobra." With Walter Gilbert, formerly star at the St. James, and a "snaky" woman.  
**ST. JAMES:** "The Whole Town's Talking." Grant Mitchell's comedy success.  
**SELWYN:** "In the Next Room." Clever mystery melodrama.  
**SHUBERT:** "Ritz Revue." Staged by the producer of the "Music Box Revues."  
**TREMONT:** "Be Yourself." With Jack Donohue—nuff said.  
**WILBUR:** "Expressing Willie." Begins tonight.

School of Astronomers Offers Proof To Show That World Is Flat Plane

(Continued from last issue)

When the projectile reaches its highest point, if we neglect air resistance, the train is directly beneath. But when the projectile reaches the ground the train will have passed on ahead. If then the earth is rotating, and a projectile were to be fired vertically into the air it would come to earth some 8400 feet to the west. This, however, is not the case; for a projectile fired vertically from a cannon will return to within a few inches of the cannon, this small error being accounted for by the air resistance.

Proves Points by Stars

"Again, take the stars for example. Take two telescopes, mounted parallel to each other, about one yard apart, and focus them so that some star will cross the field of both. Have two observers, separated by a partition, and let these observers press a contact for a recording drum the instant the star crosses the field of the respective telescopes. There will be invariably a slight difference between the time when the given star is first sighted through the first telescope and when it is sighted through the second one. Furthermore if we leave the telescopes alone for six months and then observe the heavens, we shall find the same star crossing the field of the telescopes in the same manner as before. Surely then if a difference of one yard makes a measurable difference in the position of the star, it is only reasonable to suppose that if the earth moves 200,000,000 miles in course of the six months, as is claimed, there should be an immeasurable variation of the position of the star. In view of these facts, the conclusion is that the earth is an immense non-moving, circular plane. (The physical makeup of the world of the zetic astronomer is, in general outline, a series of concentric circles. The center is the magnetic north pole, situated in the north polar sea, and surrounded by islands and polar ice. Further to the south are the continents of the world, which are really islands. Then comes the south polar sea which is hemmed in on the extreme south by icebergs.) The astronomer continues his dissertation.

"The next point we shall consider is the question of the distance of some of the heavenly bodies from the earth. By a process of simple Trigonometry, we may compute the distance of the sun from the earth. At a given instant let two people, some distance apart, each measure the angle of inclination from the sun to the earth. Following through the trigonometrical calculations entailed, we shall find that the sun is only 220 miles from the earth. By the same process we shall find that the stars are only 1000 miles from the earth.

Sun Near Earth

"We now come to the question of day and night. The sun is a ball of fire, very small in comparison to the earth; and it travels in a circular orbit, one revolution requiring 24 hours. This orbit of the sun has its smallest diameter on June 21st. At this time, this

orbit of the sun is entirely about the horizon at the north pole, consequently there is continuous daylight. Each succeeding day the orbit of the sun grows larger and larger, and consequently the sun appears lower and lower in the sky until on September 21st the sun sinks below the horizon for a period of six months. The orbit of the sun continues to grow larger, until on December 21st the orbit has reached its maximum diameter. Then follows a period in which the diameter of the orbit begins to decrease. On March 21st the sun once more appears above the horizon, and the six months of daylight have begun. At all points not included by the arctic zone, there is a period in every day when the sun is not visible, i.e., it is nighttime. This is due to the fact that the sun is at a point farthest out in its orbit and consequently it is out of sight. Since the period of revolution of the sun does not change from day to day, when the sun's orbit is at its greatest diameter,

(Continued on Page 4)

**The FENWAY**  
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in  
"BROKEN LAWS"

**WRIGLEY'S**  
after every meal  
Cleanses mouth and teeth and aids digestion.  
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CHEWING SWEET  
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The flavor lasts

THE WALKER MEMORIAL DINING SERVICE

Takes this opportunity to thank all students, alumni, faculty, and friends of Technology for their patronage during the past year, and to wish them all the best of happiness and success for the NEW YEAR

A. W. BRIDGES,  
Manager.



# BIG TRACK RALLY THURSDAY

## Mentors To Speak On Plans for Indoor Campaign

After the triyearly hibernation from the realms of sport caused by the press of scholastic calling, track men will throw off the mould 5 o'clock Thursday afternoon when the ardent followers of the sport hold a big rally. Just where the rousing gathering of the track and field men will be held is not known at present but according to Johnny Field either the Hangar Gym or 10-250 will be used as the rendezvous. Both Coaches Os Hedlund and Doc Connors are scheduled to give in a few words the plans for track in the coming indoor campaign.

According to Os Hedlund, who has been working with the distance men who have stayed in the vicinity of Boston during the recess about 17 men reported for work in the running events throughout the holidays. With the return of the other varsity competitors today or tomorrow to the boards track work will come into full swing down the home stretch for the preparation for the indoor season. Along with a first class relay team Os almost expects to turn out a few distance stars who hope to emulate the record set by their coach when in his prime as a distance runner.

### Relay Team Looks Promising

This term the mentors plan a strenuous season not only in the big intercollegiate indoor games and invitation meets planned by several athletic club, but also in weekly and bi-weekly tourneys in the Hangar and on the board track. That track is surely a dandy; with its wide banked turns and broad straightaways the twelve-lap to a mile oval goes a long way in aiding Hedlund to develop his distance men. The inadequate track of previous seasons was too much of a handicap for the tracksters to overcome so that they could ever become dangerous in varsity competition with other colleges.

Although Os does not expect to bring out any spectacular performers this early he is shaping a relay team which will go a long way in that direction, at least, that is the outlook. It is perfectly natural when one looks over the men trying out for places on the four man relay teams. Glen Bateman has returned in the hopes of winning a place on the baton carrying squad and there is also Doug Jeppe of 440 and 220 yard fame back to show the rest how he won the Technique Cup last season. Then there is George Lenses who has been reeling off some fast half miles lately, along with Jack Wiebe and Kauzmann, both of whom last year accounted for several frosh track records. The above group is further strengthened by the cross-country material, bringing the line of material for the swing around the circuit a little above the average, and that is not too optimistic.

### Doc Developing Jumpers

Speaking of track records, several of the old time marks are due for a large tumble before taps are sounded in June if the plans of the coaches hold to their course at all. Last year the frosh knocked down eleven of the ancient and honorable relics and from all appearances it looks now as if the present frosh class will hang up a few of their own. The varsity is counted upon to come through with one or two more performances that will go on the books.

Coach Tom Connors is hard at work bringing up pole vaulters and high jumpers for the meets. The latter event has been decidedly weak in the past few years and has been a "gift" to competing schools that the Beavers have had a hard time to overbalance in the score column. However, Doc has got a string of jumpers now that look promising. In the handicap meets there was a great deal of rivalry and even Chink Drew, erstwhile hammer champ attempted to enter the competition. Chink can jump, and being a good all round athlete he cleared the bar at a pretty fair height. His ankles, however, are against him, being a little too weak to stand the punishment of jumping with a heavy body to support.

### Weight Events Are Dead

Major Sanford has returned in his old capacity as first string pole vaulter but this year according to Doc he is not going to have it all his own way as there are several aspiring jumpers who will give him a vault for his money. Lucy has come along rapidly and has turned in several jumps that bring him out of the class of mediocrity. Although it looks like Sanford is in little danger of losing his former prestige in the jump when he gets back into good condition and form, it will add tremendous power to the branch of the sport to have a few other performers coming on.

Old man winter has shut down shop somewhat in the rest of the field events for the weights and hammer require along with the discus and the javelin the great open spaces for practice and not the narrow confines of a gymnasium. The field men are still hard at training under Doc and by going out for events that can be accommodated in the Hangar they will be in condition when spring arrives.

### Something For Ineligibles

Another innovation that will bring joy to college transfers and in eligibles who wish to compete this year has been inaugurated by the coaches. Such men will be taken along with the regular squad to all the big indoor games. They will receive the same coaching and training as the varsity only they will

compete unattached. This gives athletes in the school who are unable to represent Technology a chance to enter the big competitions and have a chance to make good as they will have received expert coaching and the other advantages enjoyed by the regular team.

At the meeting Thursday the above

### Out Looking Them Over



Coach Tom Connors

will be discussed by the mentors along with the plans for the season. Both Doc and Os want to see every track man in the Institute out training for the sport, the more the merrier. It will be good fun for the men, then again there is that delightful possibility that some star will prove to be eligible. So it goes, that meeting better be well attended by everybody interested in track for from the outlook it does not not appear to be the kind of the cut and dried type but one full of interest for followers of the cinder paths and the greensward.

## SEASON TICKETS SOLD TO ALUMNI

Results Are Encouraging For First Returns From Old Grads

In an attempt to arouse interest in Technology sports among the alumni residing in the vicinity of Boston, the A. A. sent out about 3000 season tickets to the old grads near at hand. The only stipulation attached was that on receipt of five dollars the ticket would be duly signed by Jim McIndo, treasurer of the Association and returned; it would then admit the bearer to any athletic contest that the A. A. has anything to do with the financial end.

About two weeks before vacation the letters were sent out and up to now the results according to Sid Baylor have been quite good when one bases his comparison on the returns of former attempts. Using the returns of

other schools for judgment, they have been mediocre. However, the idea has infinite possibilities in the eyes of the Executive Committee of the A. A. Aside from the fact that it is a good publicity scheme it gives the treasurer another fund on which to draw.

The season ticket takes in the home basketball games, wrestling matches and boxing contests. As the Arena management has jurisdiction over hockey games played on the rink, the season ticket cannot be used for hockey contests. In indoor track meets like B. A. A. games this is also the case but in all other athletic tourneys such as gym and fencing the ticket is valid. With such a string of meets as the above included in the list, the pasteboards are a good investment on point

(Continued on page 4)

## Big Banquet To Be Held By The Beaver Rowers

In order to get as early a start as possible, the freshmen will report for their first practice at the boathouse this afternoon. Coach Bill Hanes is very intent on getting together some formidable frosh eights this Spring and still urges 1928 men to come out. Dan Sayre, who turned out a strong crew in the Fall, will continue to coach the freshmen, and despite the fact that for the next month or so the men will be forced to practice on the machines, he is planning to make things interesting at the boathouse.

The Varsity, Junior Varsity, and the first and second 150 pound Varsity will not commence their winter practice for over a week. Bill has planned a large dinner, which will be given in Walker Memorial, and it promises to be a very interesting affair. This banquet is to be held on Tuesday, January 13, and will be the official opening of crew practice for the upper classmen. Until the middle of February the Varsity will report to the boathouse for practice three times a week and in that way will be in fair shape to practice in the new shell when the warm weather permits.

It is the opinion of many freshmen who come to the Institute that to go out for crew only necessitates reporting in the Spring. Bill Hanes and all the other coaches emphasize the fallacy of this thought. It is during the winter training that Bill has the opportunity of seeing the men and choosing the best oarsmen to go out on the river when the time comes. To the men who practice regularly during the next term comes the greater chance of making a crew.

### Harrier Leader-Elect



W. F. Rooney '26

At a meeting of the cross-country varsity men shortly before the holidays Bill Rooney was elected to lead the harriers next fall as captain. The election has been ratified by the Executive Committee of the M. I. T. A. A. and only the official sanction of the Advisory Council which meets tomorrow night keeps the choice from being official.

Rooney has been running for Technology since his freshman year and his ability as a varsity harrier has kept him in the athletic limelight since his Sophomore year. Bill has scored consistently this fall and has always managed to be among the first of the Cardinal and Gray harriers to score.

### SPORTS DESK

R. W. Rogers '26 of Highland Park, Illinois, familiarly known as "Jiggs," has been elected Supervising Manager of Class Football for next year. Jiggs coached the frosh football team this fall where he met with varied success.

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## VAUCLAIN SPEAKS AT ALUMNI DINNER

Head of Baldwin Locomotive  
Sees Future Success  
of Institute

(Continued from Page 1)

the Alumni Association, in introducing Dr. Vaucrain, described him as a commanding figure in the industrial world. Due to his unflinching geniality and persevering optimism, his company is famous for the absence of labor troubles and for the loyalty and devotion of the employees.

Mr. Booth, in an introductory address, referred to George Eastman's recent gift to Technology as a monument to the magnificent generosity of Mr. Eastman. He declared that this further gift shows that Technology must have proved worthy of his former gifts and that this sustained confidence is most gratifying. On behalf of the Alumni, he expressed sincere thanks to Mr. Eastman and hoped that Technology would continue to make itself worthy of the magnificent tribute.

Due to his recent operation, President Stratton was not well enough physically to attend the banquet. However, he sent a message of greeting to the assembly, which was read by Dear H. P. Talbot '85. The President expressed his sincere regrets at his inability to attend but trusted that he would be able in a short time to resume his official duties.

The year 1924, declared the Dean has been marked at Technology by two generous benefactions: the Eastman gift, and the dormitories donated by the Class of 1893. "No educational institution ever has or can have enough money. But Mr. Eastman's generous donation has added materially to the resources of Technology and we are deeply grateful to him. The dormitory gift has come at a very opportune time, for the lack of dormitories has been an acute, very acute. Dormitories give a solid and social element to student life that is most desirable, and we look to the Alumni for help in the construction of more dormitories.

### Dr. Dewey Speaks

"As yet, the Executive Committee of the Corporation has not decided the disposition of Mr. Eastman's gift, but I think it probable that the money will not solve the dormitory situation."

Dr. D. R. Dewey, Senior Professor oldest member of the Faculty and in charge of the youngest course at the Institute, Engineering Administration was the last speaker of the program. He received a hearty greeting from his former students. "Affection" was the keynote of his talk. He pointed out that emotion and engineering are not wholly incompatible. "Faith was large factor in the successful establishment of Technology. The founders of this institution had imagination; they foresaw the great future for science and prepared for it."

P. C. Davidson '25, in a specialty act gave selections on a musical saw and on a banjo. Frank Gage '22, former Tech Show favorite, played a cornet solo and accompanied himself on the piano at the same time. E. F. Payne of the Boston Globe, President of the Boston Dickens Club, and creator of "Billy, the Boy Artist," made a number of crayon caricatures, and some character impersonations.

About 500 former graduates attended the affair, and nearly a score of Alumnae and wives of Alumni. The ladies were seated at four special tables. The Main Hall in Walker where the banquet was held, was gayly decorated with holly, and many of the Alumni expressed their admiration at the innovations in the decorative scheme of the Main Hall made last summer.

## NEW LOWELL LECTURE SERIES STARTS TODAY

(Continued from Page 1)

sian Academy of Sciences, Petrograd, where he is in charge of the Ornithological Department and of the Department of Lower Vertebrates of the Geological Museum. He is an honorary member of the British and American Ornithologists' Unions and of many other scientific societies. The first of Professor Sushkin's lectures will be given tomorrow night.

On Monday, January 19, will begin a series of six lectures on "The Philosophy of Worship." The first two lectures will be given by Dr. J. B. Pratt Mark Hopkins Professor of Intellectual and Moral Philosophy at Williams College; the next two by Dr. E. S. Brightman, Borden Parker Downe Professor of Philosophy in the Graduate School of Boston University; and the last two lectures will be given by Dr. C. A. A. Bennett, Associate Professor of Philosophy at Yale.

The first three series of lectures will be given in Huntington Hall; the lectures on "The Philosophy of Religion" will be given in King's Chapel. Tickets for the Huntington Hall lectures may be secured free of charge from the Curator of the Lowell Institute; no tickets are needed for the lecture in King's Chapel.

## Notices and Announcements

### UNDERGRADUATE

#### SCABBARD AND BLADE

There will be a meeting of Scabbard and Blade in the Faculty and Alumni Room, Walker, tomorrow evening at 7.30. Uniforms must be worn.

### LOWELL INSTITUTE

A series of eight public lectures will be given by the Lowell Institute in January, beginning January 5, on the evolution of the earth's surface. Tickets may be obtained free of charge from the Curator of the Lowell Institute.

### TRACK MEETING

A meeting for all track men will be held in room 10-250 at 5:00 on January 8.

### PHYSICAL CHEMISTRY LECTURE

The first of a series of lectures on "Some Aspects of Modern Physical Chemistry" will be given by Professor P. Deybe on January 9, at 4:00 in room 4-231.

### TECH SHOW

Tech Show skits will be given at 7:30 Wednesday evening in the North Hall of Walker Memorial. All students are invited to attend.

## SKATING RINK READY NOW FOR HOCKEY TEAM

Foundation Of Ice Is Already  
Over a Foot In Depth

During the two weeks of Christmas vacation not a day was lost in preparing the rink in back of Building 10. In previous years the weather has been entirely too warm for obtaining a solid foundation of ice. This year, as there have been numerous cold days in succession, there is already a surface of ice which is over a foot deep. Each day during the holidays the men have been working in one way or another in order to have the rink in perfect readiness by the time the students return.

Major Smith, Superintendent of Buildings and Power, states that there is only one trouble that is hard to remedy. In some way air holes get under the ice and make spots of white ice. These spots break very easily and therefore leave many small holes on an otherwise smooth surface. Major Smith is very intent on finding some method to prevent this difficulty and if any student knows a positive remedy, his suggestion would be gladly accepted by the Superintendent.

It is understood that the skating rink is to be used by the Beaver hockey teams chiefly. Heretofore the Varsity have been practicing at the Arena, but now they will have an opportunity to drill on their own ground. The freshman squad will undoubtedly use the home rink the majority of the time, and around the entire area, night practices are made possible.

## SELL SEASON TICKETS TO ATHLETIC CONTESTS

(Continued from Page 3)

of interest, laying all pecuniary advantages to sports at the Institute aside.

Along with each ticket was sent the schedules of the various teams giving the plans of the whole season of sports on the one pamphlet. If given any semblance of support at all as received by other colleges, the backers of the movement believe it would provide a permanent source of revenue that push sports up a long way. It is this way in the western school and the idea has become so firmly seated that it has become a custom bordering on a duty for every alumnus and undergraduate to hold a book of tickets that cover every home contest. In this way the financial end of sports is kept going, instead of being left to the generosity of individual alumni to make donations.

## NO EXAMS NEXT TERM— WORLD WILL END SOON

The astonishing news has just been released that there will be no second term examinations. That is the official statement of Mr. C. F. Woertz of Rockland, Maine. Mr. Woertz is a preacher of the Seventh Day Adventist movement; and he has predicted that the world is coming to an end on February 6th, 1925. He explains the fact by saying that there are now 144,000 people in the United States who have reached a sufficient degree of perfection to be transported to Heaven when the great day comes.

## VERMONT CYNIC GIVES VIEWS ON TECHNOLOGY

The following clipping from The Vermont Cynic shows how others look upon Technology:

"Even the conservative engineers of M. I. T. have succumbed to a bad case of the 'crossword puzzle complex.' The engineers make up their own, using words of technical nature, or chemical formulas of complex compounds, electrical terms, and words that are used in his every-day work. Favorite expressions of professors are also used. Professor Pearson, head of the Department of English, was skeptical as to the educational value of crossword puzzles, although he admits that the puzzles, if properly chosen are a valuable aid to an extensive vocabulary of the English language."

## T. C. A. CARRIES ON DURING THE HOLIDAYS

Welfare Workers and Old Book  
Exchange Are Active

Christmas holidays found the T. C. A. department still continuing its welfare work throughout the city as well as in the school. Among the things accomplished were the looking after the functioning of a basketball league of Boston working boys and then the supervision of various little entertainments. Last Friday night, the social branch secured F. C. Lin '26, to perform sleight of hand tricks for the Sir Galahad Club of the St. Paul Church in Brookline after their annual banquet in the Parish house.

In the past, the T. C. A. has sponsored a basketball league among the working boys of Boston. This practice was renewed at the beginning of the Christmas holidays during which time the gymnasium was given to the players for use between the hours of six and eight on Wednesday and Friday nights. A. A. Capone, secretary of the employed boys of the Y. M. C. A. took charge of refereeing. This league will continue to use the Walker floor, but new arrangements for the time of its playing will be made next term in order that the Technology schedule will not be interfered with.

As the Book Exchange of the T. C. A. is a valuable aid to the students, Mr. Ross will have general bulletins containing the books needed in the courses of study posted in various places, thus enabling those having old texts to know which ones they may sell. A price two thirds of that which the owner paid will be given. This service is without profit to the Exchange and depends entirely upon the cooperation of students.

## ASTRONOMER MAINTAINS WORLD IS FLAT PLANE

(Continued from Page 2)

the sun has its maximum distance to travel, and consequently the days are shortest.

"The question may now come up. 'Why does the sun appear to rise and set?' If we will remember our observations with regard to the horizon, we will remember that the earth, below our line of vision always met the sky, about our line of vision, at a line on the level with our eyes, regardless of how high from the ground we were. Then at the point in the east where our line of vision meets the horizon, that, too, will be the point at which the sun appears to rise. Similarly do we explain the setting of the sun.

"The next question we will consider is the explanation of the eclipse. It is argued that in an eclipse of the moon, the earth comes between the sun and the moon. However, it is on record that an eclipse of the full moon has often occurred before the sun has set. How then could the earth be between the sun and the moon if both were above the horizon? The satisfactory explanation of these phenomena is in the fact that the earth has a non-luminous satellite, which at times comes into line with the sun, the earth, and the moon.

### Circumnavigation Explained

"In closing let us consider the theory of the circumnavigation of the globe. This theory that the world is a globe is based on the following syllogism: (1) Only a globe can be circumnavigated; (2) The earth has been circumnavigated; (3) Ergo: The earth is a globe. The fallacy in this argument lies in the major premise. Obviously, a globe is not the only thing which can be circumnavigated. Let us consider our flat world. At any point around the world a compass needle will always point to the north pole. Since by the construction of the compass east and west are at right angles to this north-south line, a person could not help travelling in a great circle about the north pole. Therefore, a person need only follow the east or west point of his compass, and he would eventually return to original starting point.

"Concluding, I wish to say only that I hope I have proved conclusively to you that the earth is a vast, flat circular, and immovable plane."

## LITCHFIELD WILL GIVE NEXT ALDRED LECTURE

(Continued from Page 1)

California, as well as the purchase of their own water supply and coal mine. In order to meet the ever-increasing demand for production a factory was started in Canada in 1913 and another in Los Angeles six years later. Both of these plants are close to distribution centers of two major materials, rubber and cotton.

Today Goodyear products are known the world over. The attaining of so high a place among the great industrial concerns of the country in so short a period of time has been recognized as a tremendous achievement. According to an article in "The Goodyear News," a magazine for Goodyear dealers published by the Goodyear Tire and Rubber Company, two men have been conspicuous in the building of Goodyear, one of whom is Mr. Litchfield, in charge of production since 1901 and now first vice-president.

## CIVIL SERVICE HOLDS EXAMINATIONS SOON

An examination for junior engineer will be held by the United States Civil Service Commission throughout the country on January 21, 1925. It is to fill vacancies in various branches of the Government service.

The duties of these positions are to perform such work as routine testing, inspection of engineering material, drawing up plans for minor projects, preparing specifications for engineering material or apparatus, performing field work, making computations, preparing maps, assisting in conduct of experimental research tests, compiling reports, and handling technical correspondence.

Competitors will be rated on general physics, pure mathematics, practical experience. The option subjects include civil engineering and several other engineering branches.

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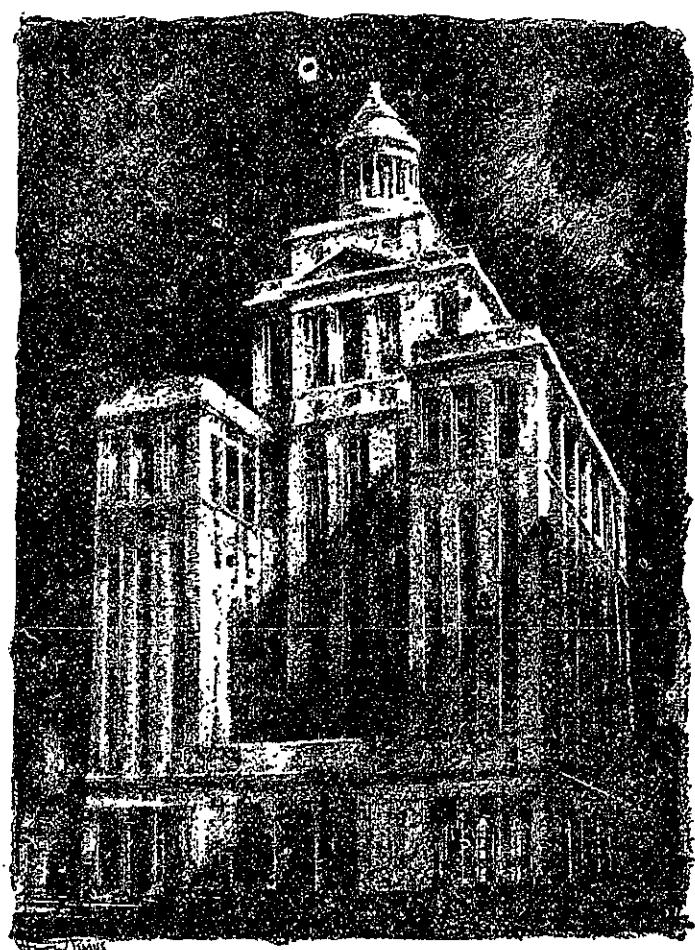
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